

IN THE CLAIMS:

Please amend the claims as follows.

3. (Currently Amended) A method for manufacturing a GaN compound semiconductor element, comprising the steps of:

B1 (a) forming, on a substrate, an N type GaN compound semiconductor layer and a GaN compound semiconductor layer which includes a P type impurity;

(b) irradiating electromagnetic radiation of a predetermined wavelength onto said GaN compound semiconductor layer which includes a P type impurity; and

(c) activating said P type impurity by applying thermal energy which is approximately 400-500 degree centigrade to said P type impurity in an atmosphere of normal air while irradiating said GaN compound semiconductor layer.

4. (Previously Amended) The method according to claim 3, wherein said step (a) includes the steps of:

(a1) forming a buffer layer on said substrate;

(a2) forming an N type GaN compound semiconductor layer on said buffer layer; and

(a3) forming said GaN compound semiconductor layer which includes a P type impurity on said N type GaN compound semiconductor layer.

5. (Previously Amended) The method according to claim 3, wherein said step (a)

includes the steps of:

- B1
Cont.
- (a1) forming a buffer layer on said substrate;
 - (a2) forming said GaN compound semiconductor layer which includes a P type impurity on said buffer layer; and
 - (a3) forming said N type GaN compound semiconductor layer on said GaN compound semiconductor layer which includes a P type impurity.

- 6. (Previously Amended) The method according to claim 3, wherein said P type impurity is at least one of Mg, Zn, Cd, Be, and Ca.
 - 7. (Previously Amended) The method according to claim 3, wherein electromagnetic radiation having a wavelength of 4.5 μm is irradiated with an intensity of 0.01 mW/mm^2 or greater at said step (b).
 - 8. (Previously Amended) The method according to claim 3, wherein electromagnetic radiation having a frequency of 2.45 GHz is irradiated at an intensity of 1 mW/cm^2 or greater at said step (b).
 - 9. (Previously Amended) The method according to claim 3, wherein said N type GaN compound semiconductor layer is formed by doping an N type impurity to a GaN compound semiconductor.
 - 15. (Cancelled)
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